Stephanie Doolan

STATE OF MISSOURI

Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

December 6, 2007

CERTIFIED MAIL – 7001 2510 0005 3345 3919
RETURN RECEIPT REQUESTED

Mr. Bob Green
Plant Engineer
Parker Hannifin Corporation
Automotive Connectors Division
Highway E
Kennett, MO 63857

RE: Parker Hannifin Corporation, Automotive Connectors Division, Kennett, Missouri
EPA ID# MOD020350245

Dear Mr. Green:

Enclosed is a duplicate original of the closed facility oversight inspection report for the Parker Hannifin Corporation, facility located in Kennett, Missouri. The report is based on the August 10, 2006, inspection of the facility conducted by Sabir Vali, P.E., of the Missouri Department of Natural Resources' Hazardous Waste Program.

Please respond to the recommendations regarding the remaining monitoring wells at the facility as noted in this report within 60 days of receipt of this letter, and provide written notification to the department of your intentions with respect to these wells.

The department appreciates your cooperation in this matter. If you have any questions regarding this letter, please contact Mr. Vali or me at the Missouri Department of Natural Resources, Hazardous Waste Program, P.O. Box 176, Jefferson City, MO 65102-0176, or by phone at (573) 751-3553.

Sincerely,

HAZARDOUS WASTE PROGRAM

Richard A. Nussbaum, P.E., R.G.
Chief, Permits Section

478164
RCRA

RAN:svs

Attachments

c: Ms. Stephanie Doolan, U.S. EPA, Region VII
Southeast Regional Office

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MISSOURI DEPARTMENT OF NATURAL RESOURCES
CLOSED FACILITY OVERSIGHT INSPECTION

FACILITY

Parker Hannifin Corporation
Automotive Connectors Division
Highway E
Kennett, MO 63857
(573) 717-2208

EPA ID# MOD020350245
MO ID# 001219

PARTICIPANTS

Missouri Department of Natural Resources

Sabir Vali, P.E.
Environmental Engineer
Permits Section
Hazardous Waste Program
1738 East Elm Street
Jefferson City, MO 65101

Parker Hannifin Corporation

Bob Green
Plant Engineer
Hazardous Waste Coordinator
Kennett, MO 63857

INTRODUCTION

On August 10, 2006, Sabir Vali, P.E., an inspector representing the Missouri Department of Natural Resources, conducted a closed facility oversight inspection at the Parker Hannifin Corporation (PHC), facility located in Kennett, Missouri. This inspection was conducted under the authority of the Missouri Hazardous Waste Management Law Sections 260.375 (9) and 260.377 RSMo. The purpose of the inspection was to assess compliance with the Missouri Hazardous Waste Management Law and regulations and to update the department's knowledge of existing conditions at the facility. The scope of the inspection included the facility's closed surface impoundment area, and Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified in the April 1989, Resource Conservation Recovery Act (RCRA) Facility Assessment (RFA) prepared by Jacobs Engineering Group, Inc., on April 24, 1989, under contract with the Environmental Protection Agency. The checklist used during the inspection is included as Attachment 1.

The inspection consisted of an opening conference, a facility tour, and a closing conference. During the opening conference, the inspector presented his credentials and discussed the purpose and scope

of the inspection with Mr. Bob Green, the plant engineer. The inspector toured the facility and conducted a closing conference with Mr. Green. During the closing conference the inspector explained the expedited corrective action process.

FACILITY DESCRIPTION

The facility is located in the City of Kennett, Dunklin County, Missouri. The 30-acre property is located approximately three miles southeast of the St. Francis River and approximately four miles northwest of a series of parallel canals referred to as The Floodway. Surrounding land use is primarily agricultural in nature. Uniroyal, Inc. initially constructed the facility in 1969. On June 8, 1984, Uniroyal, Inc. transferred its full-leasehold interest in the facility to Parker-Hannifin Corporation (PHC). The facility now consists of a single building containing manufacturing equipment, storage, shipping and office areas. The facility manufactures reinforced high-pressure automotive air conditioning hoses by extruding rubber through a die around a nylon mandrel. PHC's main clients are General Motors, Ford, and Chrysler.

On August 18, 1988, a Visual Site Inspection (VSI) was conducted by Jacobs Engineering Group, Incorporated. Based on the VSI, a RFA was prepared by Jacobs Engineering Group in April 1989. Out of the ten SWMUs and three AOCs identified in the RFA, only the Former Surface Impoundment (SWMU 2) was a RCRA regulated unit. SWMU 2 did not receive wastes after September 1985. The department approved the final closure plan for SWMU 2 on June 16, 1986. As part of closure, the Surface Impoundment (SI) was filled with clean soil and vegetated the surface. Final clean closure in accordance with RCRA was certified in February 24,1987. The department accepted the clean closure certification and released PHC of all financial assurance requirements associated with the closure on May 29, 1987.

This was a clean closure, hence, post-closure care for the closed surface impoundment (SWMU 2) was not required at the facility. At the time of the RFA there were four monitoring wells and seven observation wells.

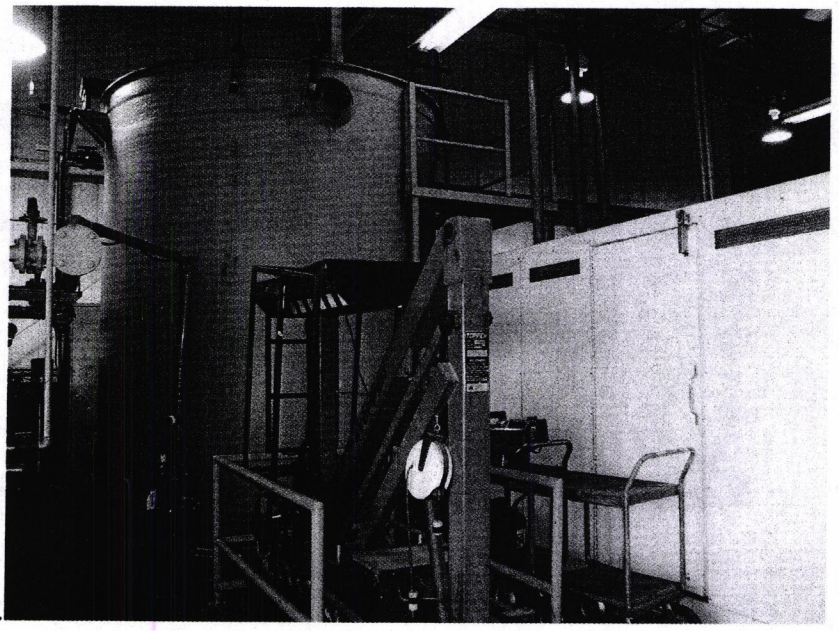
During past operations, several waste streams were generated, including 1,1,1-trichloroethane (TCA), mineral spirits containing naphthalene, waste oil, and three different types of sludges containing lead. According to PHC, all scrap rubber and hose is disposed of in a non-industrial landfill. The facility is currently a small quantity generator of hazardous waste.

The physical characteristics and operating history of each of the SWMUs and AOCs identified in the 1989 RFA are outlined below. Each section includes observations made during the August 10, 2006, inspection.

- SWMU 1: Wastewater Treatment Plant. The plant began operating in September 1985. The purpose of the plant was to collect and remove hazardous waste constituents (primarily lead) from the wastewater. The treatment plant was located inside the southeastern portion of the Parker Plant. The plant consisted of underground sumps, filtration tanks, settling tanks, a cooling tower and a filter cake press. The waste generated at this unit was filter cake sludge, which was characteristically hazardous for lead. Two potential migration pathways were identified in the RFA, those being soil and groundwater. In 1992, the system was shutdown, dismantled, and sold for reuse by another Parker Division. A pH adjustment tank, located inside the main building, was left in place to be used should the facility need to adjust the pH of contact cooling water that discharges to the city sewer.

Inspection Observations - The pH adjustment tank remains in place and in use. The inspector requested that PHC provide the approximate dates that the plant was dismantled and disposed. The concrete floor around the tank appears to be clean and free of cracks and stains. No evidence of spills or release was observed during the inspection.

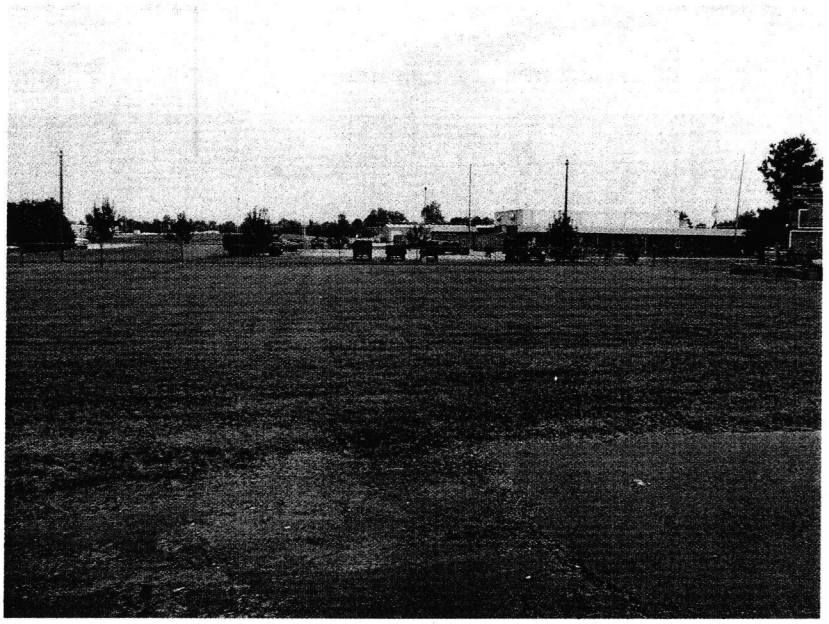
SWMU 1 – Wastewater Treatment Plant Area, shows a pH adjustment tank



- SWMU 2: Former Surface Impoundment (SI) Area. This unit was constructed and used from1969 until September 1985. The unit maintained a bottom area of 44' by 91' with a 4' operating depth. The design capacity of the impoundment was 100,000 gallons. The sides and bottom of the unit were constructed using a one-foot layer of bentonite over the native soil. The impoundment was designed to settle solids out of suspension from wastewater from the various sumps and manufacturing units, including a vulcanizer. The waste generated was lead-contaminated sludge. The potential migration pathways identified in the RFA, were soil, surface water, and groundwater. The impoundment did not receive waste after September 1985. Closure procedures were initiated shortly thereafter. The closure plan was approved by the department on June 16, 1986. As part of closure, the SI was filled with clean soil and the surface was vegetated. The department accepted a certification of clean closure on May 29, 1987.

Inspection Observations - The inspector observed that this area is currently covered by native soils compacted over the entire area and sloped to promote drainage and prevent ponding. A mixture of native grass has been planted on the soil cover to prevent erosion and promote evapotranspiration. The vegetative cover was inspected for growth of any inappropriate vegetation, presence of ponding water, erosion, subsidence, cracks, or burrow holes. The cover was in satisfactory condition and free of weeds, stressed vegetation, ponding etc. Regular mowing controls the weed growth.

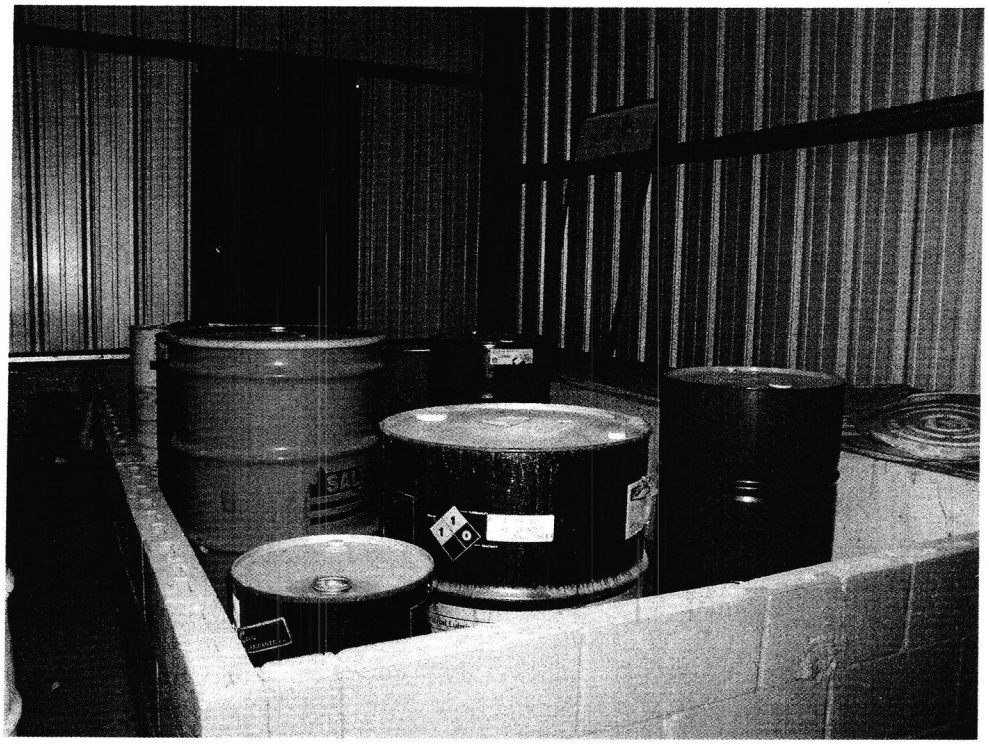
SWMU 2 – Former Surface Impoundment Area.



- SWMU 3: Waste Oil Storage Tank Area. This area consisted of a temporary storage tank and an incinerator to burn waste oil. The incinerator operated between 1979 and late 1984. The 8000-gallon above ground steel storage tank sat on a steel frame elevated off of a concrete pad. A two-ft high, one-ft wide concrete berm surrounded the tank, which served as a catch basin in the event of a release. Waste oil and spent solvents were stored in the tank. At the time of 1989 RFA approximately 2000 to 3000 gallons of waste oil was stored here for less than 90 days and then recycled by Ace Oil Co. This tank was dismantled and was removed prior to 1990. The tank storage area has since been enclosed and converted into a hazardous waste storage building. Three potential migration pathways were identified in the RFA- soil, surface water, and groundwater.

Inspection Observations - The tank storage area is now enclosed and converted into the hazardous waste storage building. The inspector requested that PHC furnish dates of dismantling, the method of waste disposal, and results of closure sampling, if any sampling was performed.

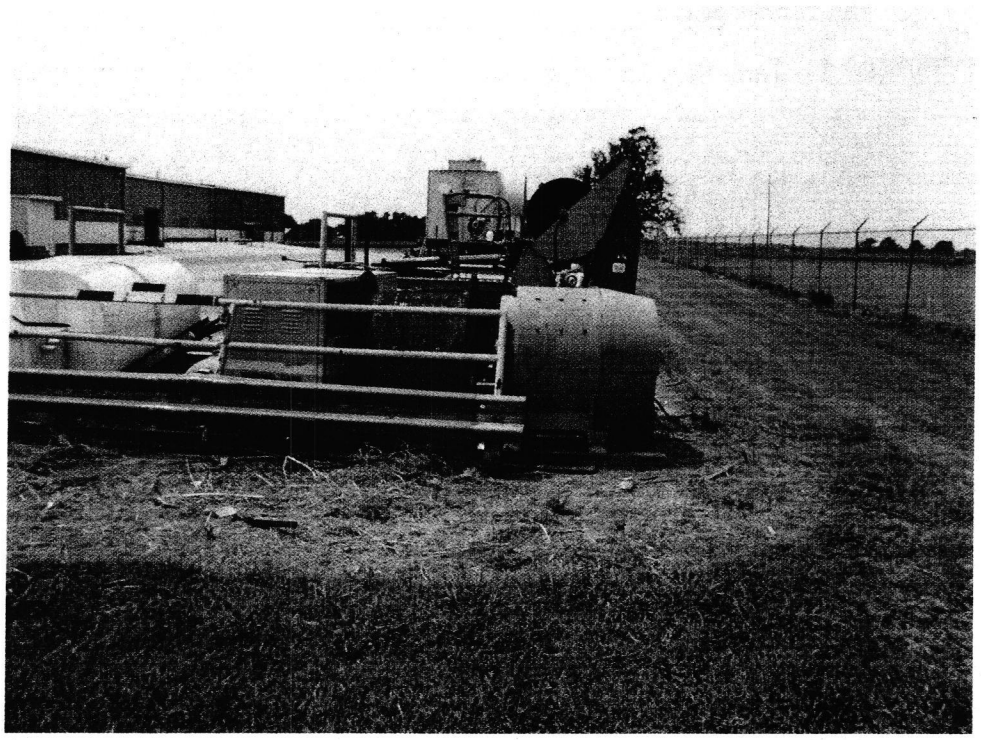
SWMU 3 – Tank Storage Area, converted into the hazardous waste storage area.



- SWMU 4: Container Storage Area. The area was used for the storage of containerized wastes from 1969 until 1991. The containers were placed on concrete pavement located at the extreme northern portion of the facility property. The purpose of this unit was for temporary storage of hazardous waste (less than 90 days). Lead contaminated sludge, lead dross, and lead dust that was characteristically hazardous for lead had been temporarily stored in this area. When the RFA was conducted in April 1989, soil and surface water were identified as potential migration pathways. The facility discontinued using this area after 1991.

Inspection Observations - This area is now covered by native soil and looks satisfactory. The area is now used for storing scrap material. The inspector requested PHC to furnish details of disposed materials and results of closure sampling, if any sampling was performed.

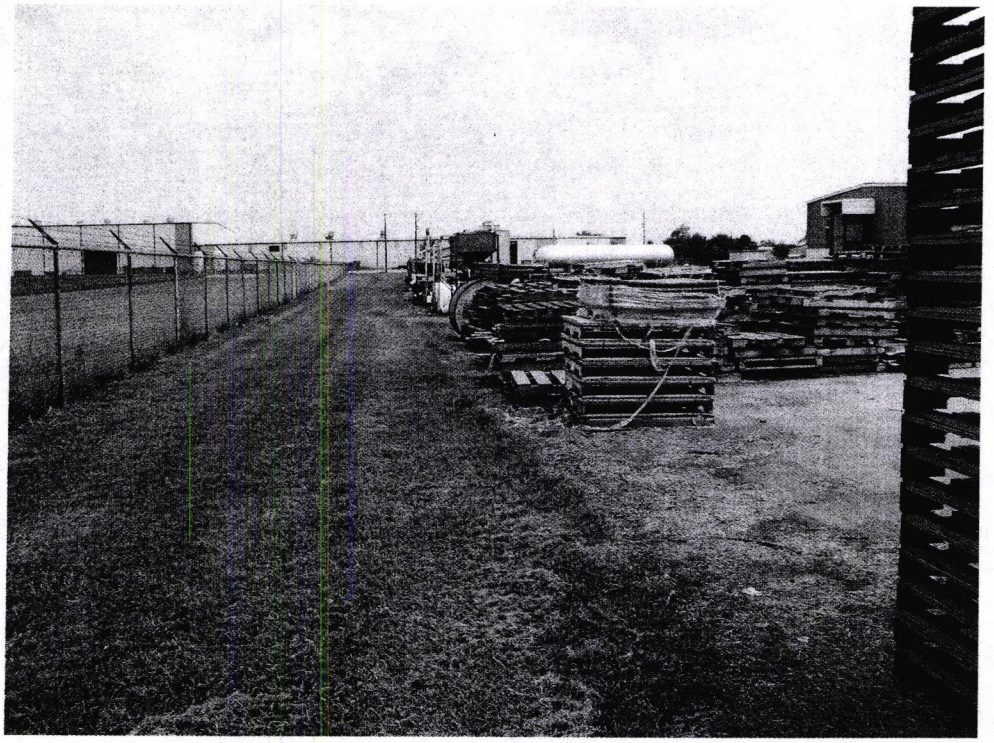
SWMU 4 - Container Storage Area



- SWMU 5: Oily Stained Areas. Two areas of oil-stained soil were observed and indicated in Figure No. 4 of the RFA, refer to Attachment 2 (Facility Map showing locations of SWMUs and AOCs). The first area (approximately 40 sq ft) was located immediately north of the former container storage area, and the second area (approximately 50 sq ft) was approximately 70 feet east of the first area. The depth of staining could not be determined for either area. The source of staining of these two areas was believed to be the scrap machinery stored nearby. The characteristics and quantity of the oil and grease waste is unknown. Three potential migration pathways were identified (i.e., soil, surface water, and groundwater). The exposure potential for soil was high because of the staining and evidence of a release was clearly documented.

Inspection Observations - The two oil-stained areas described in the RFA are now covered by native grass. The vegetative cover was green and no stressed vegetation or stains were observed. Overall, the area looked satisfactory.

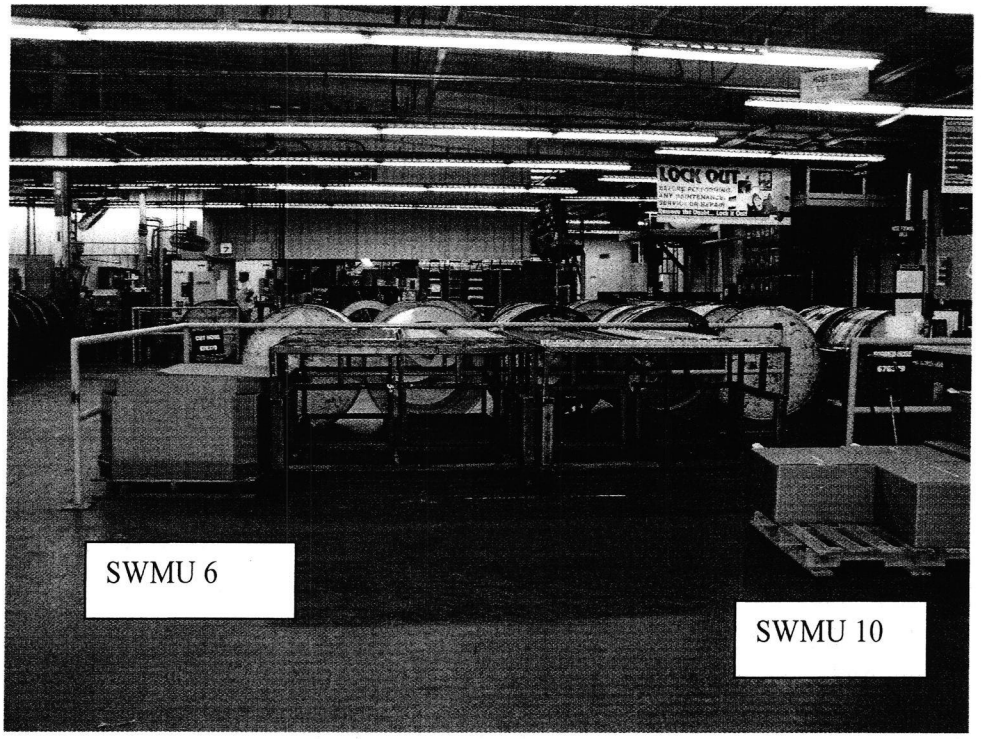
SWMU 5 - Oil Stained Areas, now covered with well maintained grass



- SWMU 6: Furnace and Stripper Air Pollution Control Systems. The system was installed during construction of the plant in 1968 and 1969. The lead stripper operated by PHC generated wastes in the form of dust. The facility was not required to maintain an air emission permit because the pollution control system was installed prior to 1980 with no significant modifications. The operation was discontinued in 1993. The equipment was sold to a similar facility in North Carolina.

Inspection Observations - The area looks clean and is covered by a concrete floor. The concrete floor is free of cracks and stains. No further activities at this area.

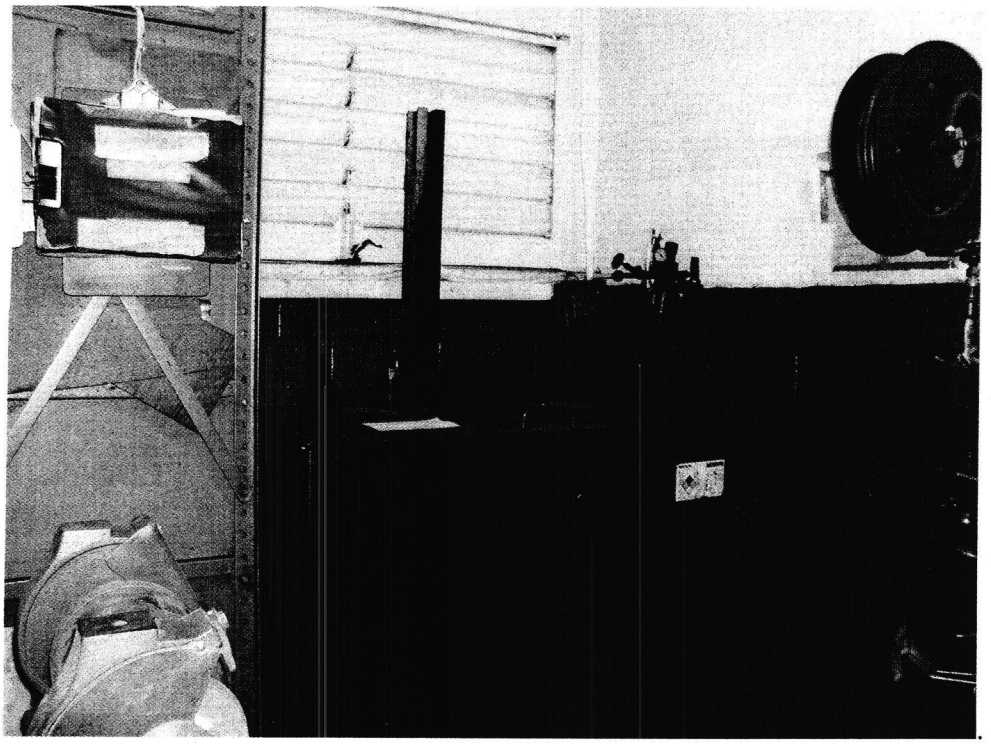
SWMU 6 – Furnace and Stripper Air Pollution Control Systems Area



- SWMU 7: Shuttle Repair and Cleaning Station. This unit is located inside the plant. At this location, PHC disassembles, cleans, repairs and reassembles shuttles, which are the primary components of the braiding process. The shuttles are cleaned by dipping the parts in a bath filled with mineral spirits. The bath consists of a single aboveground steel tank with approximate dimensions of 5 ft x 2 ft x 3 ft high. The unit was constructed in 1968-1969 and has been used ever since. The waste solvents were originally blended for fuel burning, then later recycled by a qualified third party after the oil burner was removed from the facility. The facility no longer uses 1,1,1-TCA.

Inspection Observations. The unit is used for cleaning small parts. The station is cleaned and maintained on a regular basis. No evidence of spills or release was observed during the inspection.

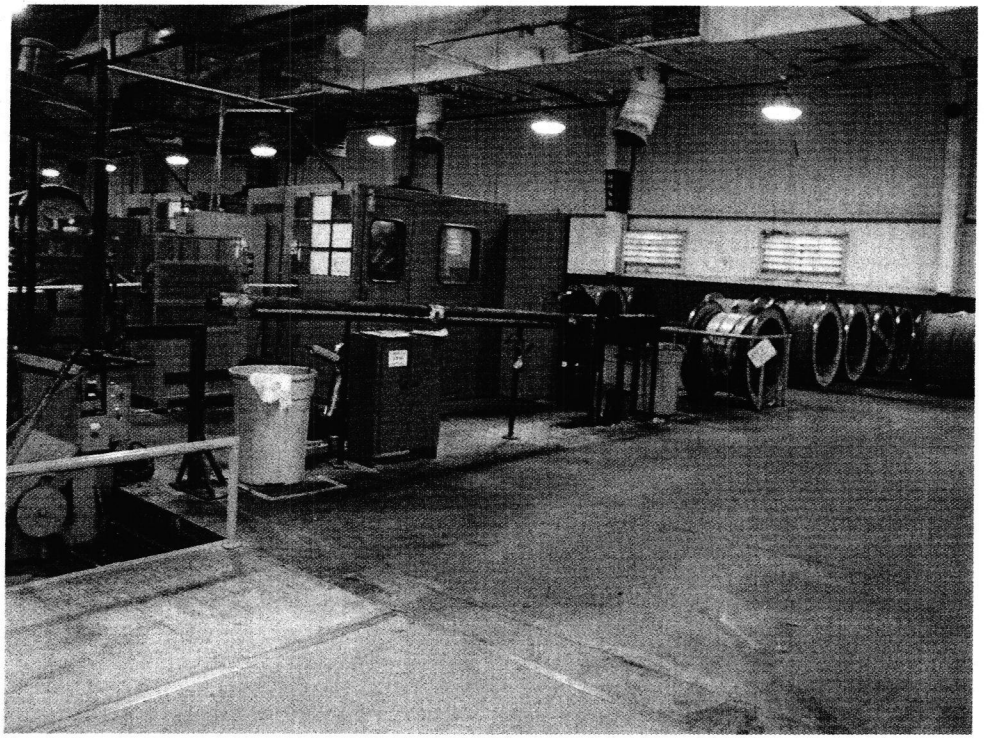
SWMU 7 - Shuttle Repair and Cleaning Station Area



- SWMU 8: Waste Solvent Storage Area. This unit was located inside the plant and was used to temporarily store waste solvents, paint, and diesel. The waste solvent was accumulated in containers and was placed in a small explosion-proof room. The room was constructed with concrete flooring, cinder block walls, and a heavy gauge metal door. This unit was also constructed concurrently with the plant in 1968-1969. One of the solvents stored at this unit was 1,1,1-TCA that was sent to a qualified third party for recycling. The only potential migration pathway identified in the RFA for a release in this area was determined to be air. In 1992, solvent storage was moved into the enclosed hazardous waste storage building built on the location of the former waste oil storage tank area (see SWMU 3).

Inspection Observations - This unit is no longer in use. The area looks clean and is covered by a concrete floor. The concrete floor is free of cracks and stains. No evidence of spills or release was observed during the inspection.

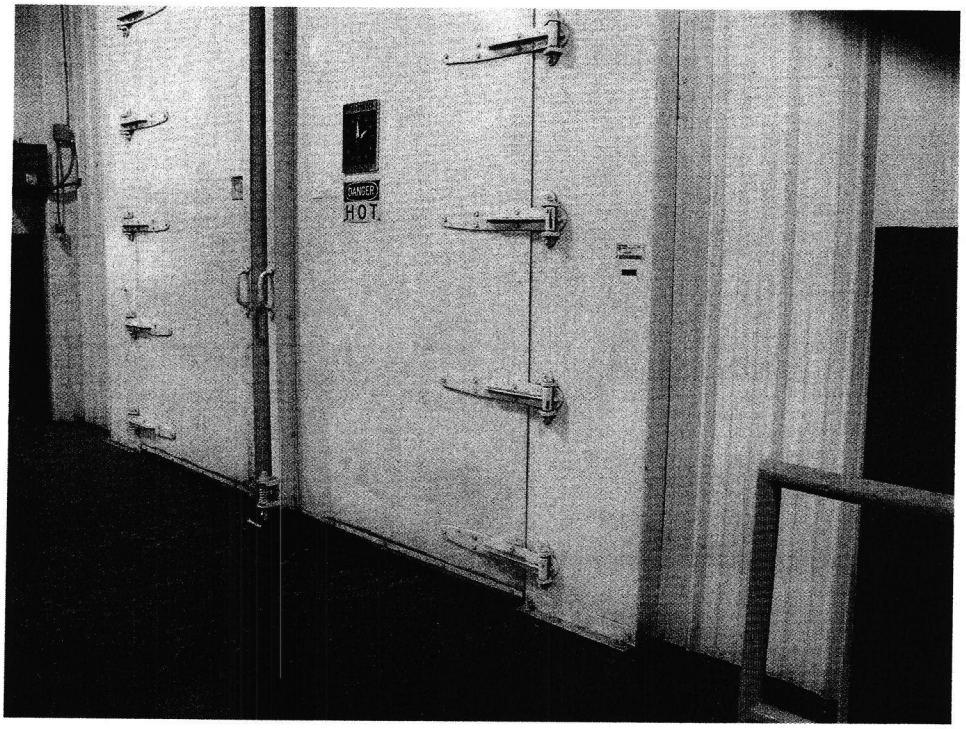
SWMU 8 – Waste Solvent Storage Area



- SWMU 9: Lubrication Area. This unit was located inside the plant. A lubricant was used by the facility to facilitate the removal of rubber hose from the mandrel. This process was in use from 1969 until 1980. During that time the lubricant contained TCA. In the early 1980s, the small quantities of sludge that were generated by this process were combined with other wastes and were blended with waste oil prior to burning in the facility's incinerator. Since 1982, the waste sludge is sent to Wall Chemical Transporters, a qualified third party for disposal. The only waste reportedly generated at this unit was sludge containing TCA.

Inspection Observations - Currently the unit uses a non-TCA lubricant. The area looks clean and is covered by a concrete floor. The floor is free of cracks and stains. No evidence of spills or release was observed during the inspection.

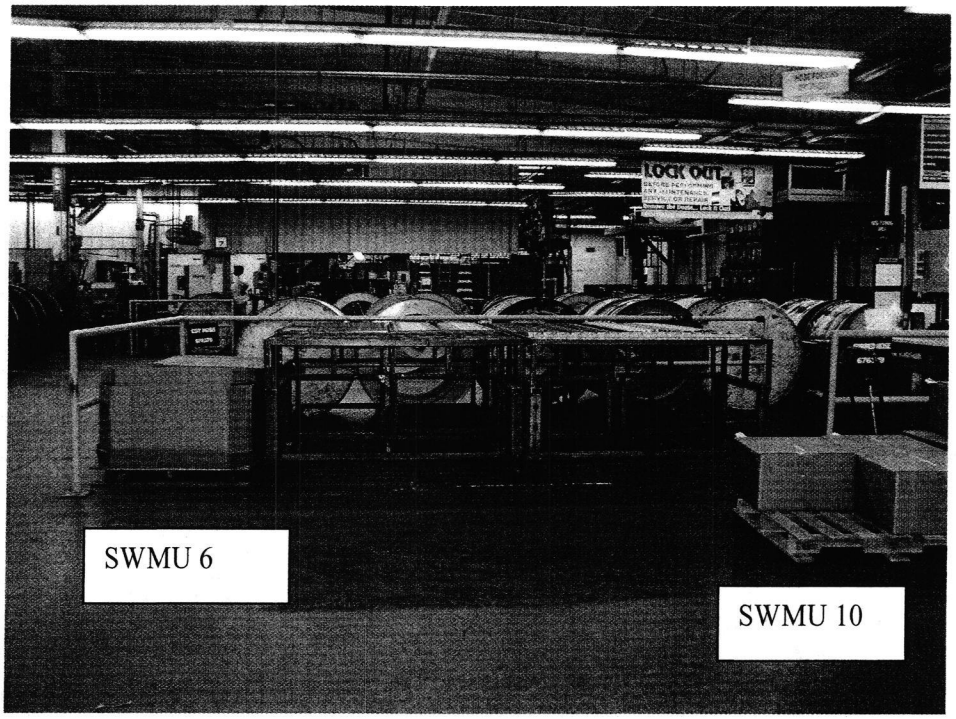
SWMU 9 - Lubrication Area



- SWMU 10: Melt Pot Furnace. This process formerly melted raw and recycled lead in this furnace for extrusion around rubber hose. This process generated lead dross waste. The dross was periodically raked off of the molten lead, temporarily stored in the container storage area and later transported offsite for recycling. The unit and process were used from 1969 until the process was discontinued and the unit was removed in 1992.

Inspection Observations - Currently the area is covered by a concrete floor that looks clean. The concrete floor appears to be free of cracks and stains.

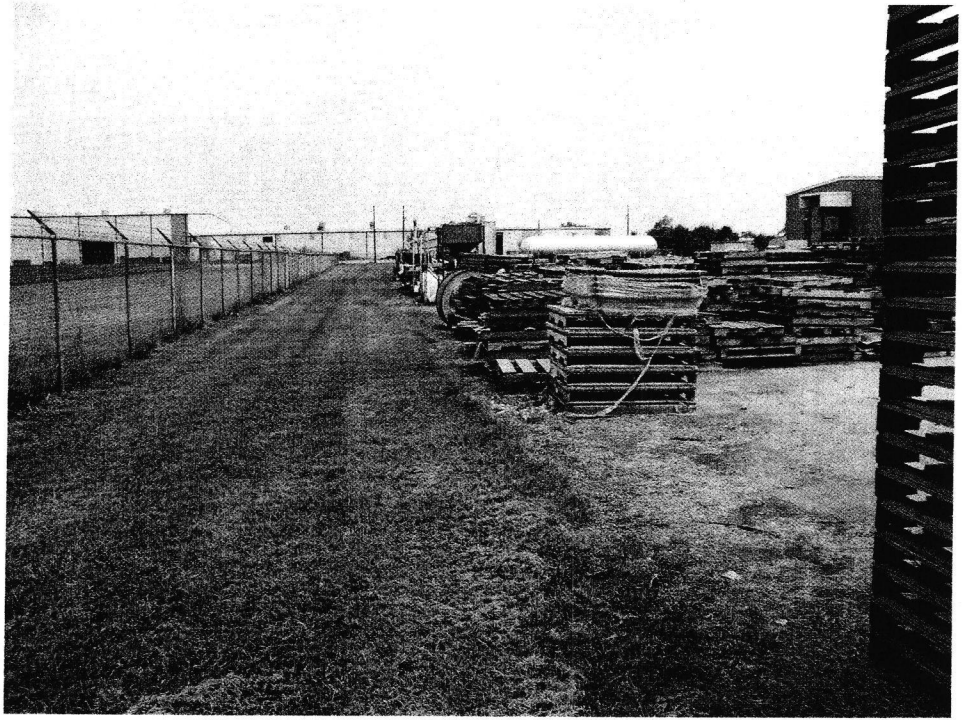
SWMU 10 - Melt Pot Furnace



- AOC A: Unused Solvent Storage Area. This area was used from 1969-1995 for the storage of miscellaneous 55-gallon drums including those containing unused TCA. This area was located on the concrete pavement along the northernmost facility property boundary. The drums were stored on wooden pallets on the concrete pavement. Two to three 55-gallon drums of virgin TCA were stored here. The 1989 RFA recommended either the installation of curbing in this area to contain any leaks or finding a new storage area. The facility ceased using TCA in the production process thus eliminated the need for an upgraded storage area.

Inspection Observations - The area is partly covered by native soil and grass, and partly covered by asphalt pavement. No current facility activities are taking place in this area. The area was free of stressed vegetation, ponding, subsidence, and erosion. The asphalt area was free of cracks and stains.

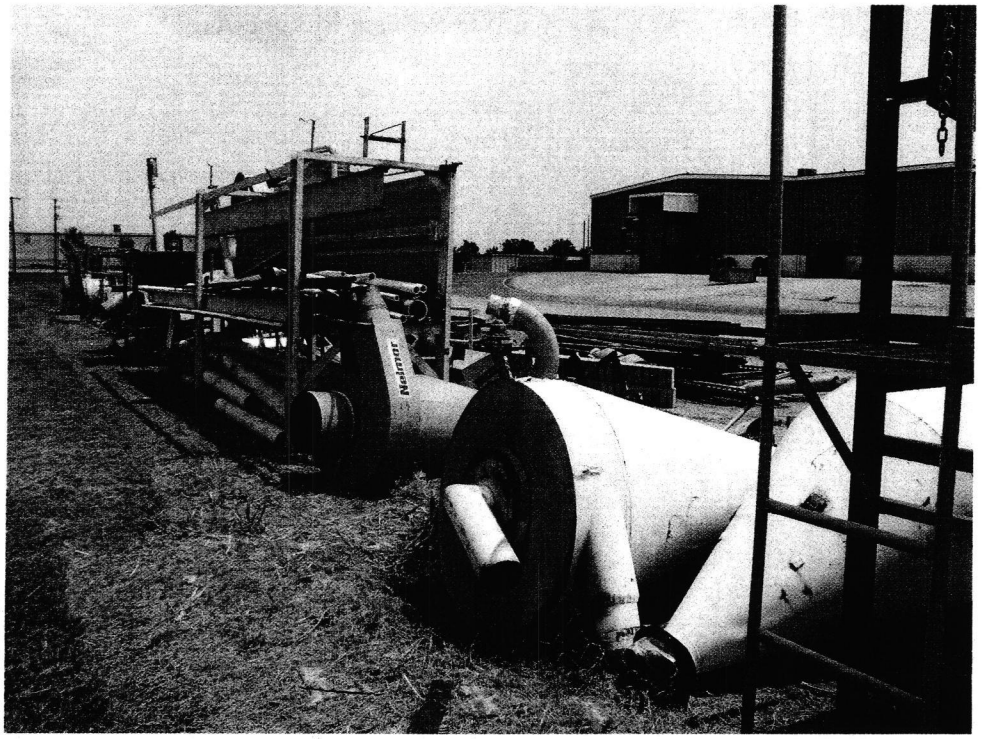
AOC A – Unused Solvent Storage Area



- AOC B: Scrap Machinery Storage Area. Scrap machinery and junk were stored on the concrete pavement and some of the asphalt pavement in the northern portion of the property. The scrap machinery was a source of oil and grease contamination. The length of time the scrap was stored is unknown. In addition to potentially contaminating surrounding soil with oil and grease, this area was of concern at the time of 1989 RFA because of the potential damage to nearby waste oil containers placed in SWMU 4.

Inspection Observations - The area is currently used for storing wooden pallets and scrap machinery stored on pallets and the ground. Removal of scrap machinery/junk from this area is performed on a regular basis. The area is free of grease/oil contamination.

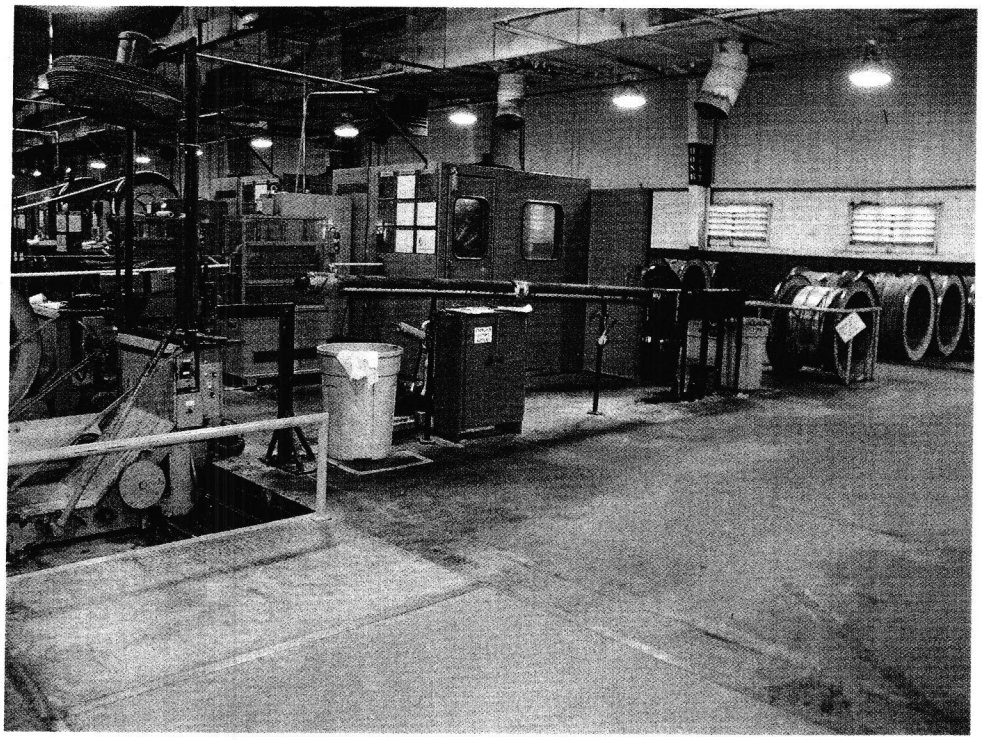
AOC B – Scrap Machinery Storage Area



- AOC C: Adhesive Station. An adhesive containing TCA and xylene was applied over the previously braided rubber hose. Small amount of this adhesive dripped on the concrete floor. This process has been used continually since the plant became operational. The trace amounts of adhesive, which were allowed to drip on the floor, were probably insignificant. The 1989 RFA suggested installation of a catch basin to contain potential large-scale spills/releases. However, TCA and other VOCs were removed from the adhesive formula eliminating the exposure and release risks.

Inspection Observations - The adhesive pots are mobile and placed in the process run at different points based on the specifications of the product run. A clean concrete floor, which is free of cracks and stains covers the area.

AOC C – Adhesive Station

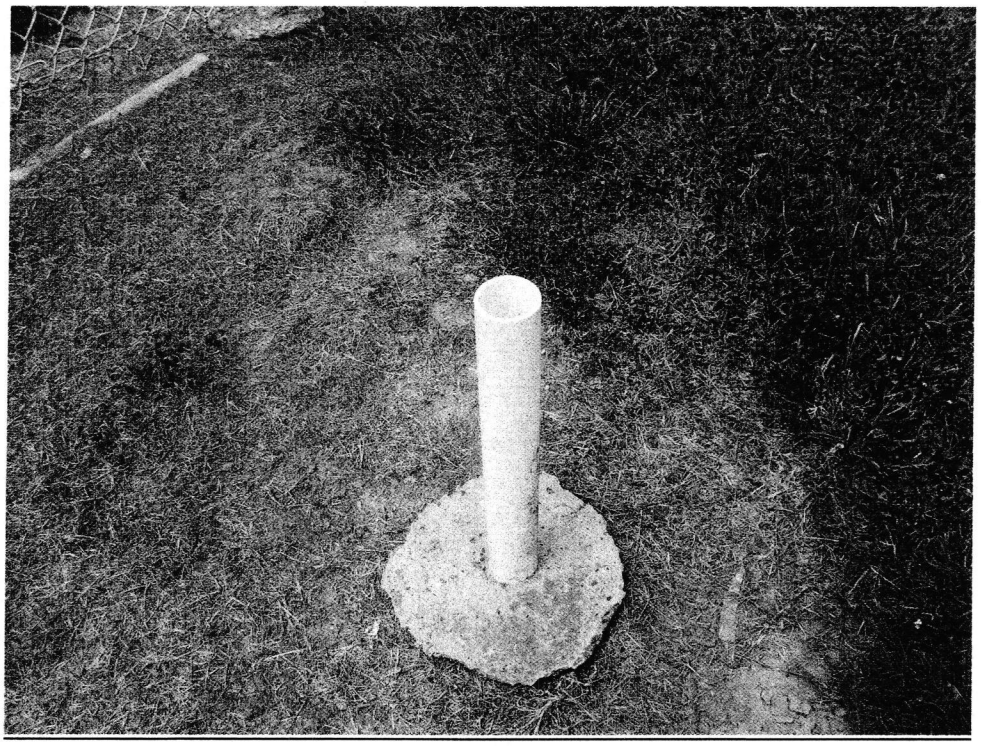


- Inspection of Monitoring Wells & Observation Wells: According to the April 1989 RFA, there were seven observation wells and four monitoring wells installed at the facility. There were concerns about metals in the groundwater. The last metals sampling event dated November 11, 1986, indicated low levels of mercury and lead. The facility ceased sampling in 1987 after clean closure of the surface impoundment was achieved. The wells are currently buried, plugged or

lost (all except two are still visible). The two observation wells OW-1, and OW-2 were checked for physical integrity of surface well seal, outer well casing, inner well casing, and security of the well.

Inspection Observations - The identification numbers of the two wells are not clearly marked and the surface well seals are loose. Currently the facility is not using these wells for sampling. The wells were installed before 1980; hence, they were not registered with the department's Division of Geology and Land Survey. None of the wells have been plugged in accordance with the Missouri Well Installation Rules (10 CSR 23-4.080) administered by Division of Geology and Land Survey. The facility gave assurance that the existing wells (and any other that are subsequently located) will be plugged according to the applicable rules.

Observation Well - OW- 1



At the completion of the tour, a closing discussion took place between Mr. Green and the department inspector. The main discussion focused on the process to be followed to achieve a "No Further Action" or "Corrective Action Complete" letter from the department. The inspector handed a copy of the model Expedited Corrective Action Program (ECAP) Letter of Agreement, and a copy of the Expedited Corrective Action Memorandum of Understanding between the Hazardous Waste Program and the U.S. Environmental Protection Agency to Mr. Green.

RECOMMENDATIONS

- The department recommends PHC plug and abandon the monitoring and observation wells.
- The department recommended PHC submit a Description of Current Conditions Report (DCCR) to update changes at the facility including the history of the SWMUs and AOCs since the April 1989 RFA.
- At the time of the inspection, the department suggested PHC consider entering into a letter of agreement for Expedited Corrective Action. After reviewing the documentation for the clean closure of the Former Surface Impoundment and considering the finding of this inspection, the department feels that an Expedited Corrective Action Letter of Agreement may not be necessary for closing out the corrective action issues at the facility.

SUBSEQUENT EVENTS

PHC submitted a DCCR to the department in January 2007. The DCCR needs more information on the present status of SWMUs/AOCs and monitoring wells. Once the DCCR is deemed adequate and all wells are properly plugged and abandoned, the department will determine if any further corrective action is needed, including development of a letter of agreement, or whether the existing information is sufficient to release the PHC facility from the universe of former interim status RCRA treatment, storage and disposal facilities subject to corrective action.

PREPARED BY:

Sabir Vali, P.E.
Environmental Engineer
Permits Section
Hazardous Waste Program

APPROVED BY:

Richard A. Nussbaum, P.E., R.G.
Chief, Permits Section
Hazardous Waste Program

ATTACHMENTS
1. Checklist for Landfill and Wells
2. Facility map showing location of SWMUs and AOCs
3. Facility map showing location of observation wells and monitoring wells
4. List of Acronyms

ATTACHMENT 1

CHECKLIST FOR LANDFILL CAP, WELLS & FENCE

SSV

MISSOURI DEPARTMENT OF NATURAL RESOURCES

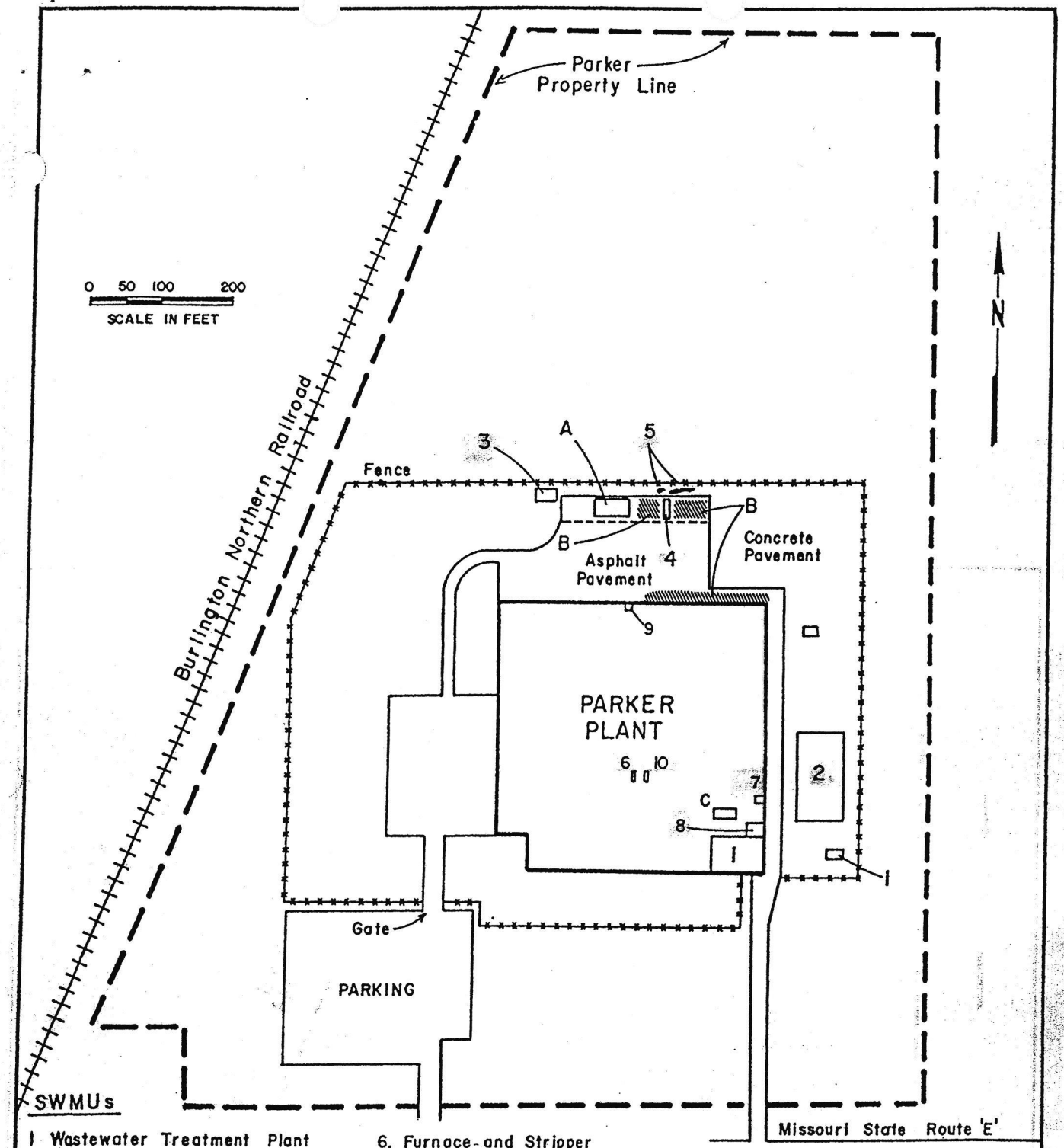
CHECKLIST FOR LANDFILL INSPECTION

Name of Landfill Former Surface Impoundment Area (SWMU 2) at Parker Hannifin, Kennett, Missouri

DATE	8/10/2006						INSPECTOR	SSV
ITEM		REMARKS						
RUN OFF CONTROL		(Note distressed or inappropriate vegetation-Ex: Large weeded areas, trees etc.)						
	Vegetation	OK						
		(Drainage - Water moving away from landfill, no ponding at bottom)						
	Grading	OK						
COVER CONDITION								
	Ponding	None Observed						
	Drainage	OK						
	Erosion	None Observed						
	Cracks	None Observed						
	Ruts	None Observed						
Burrowing Animal Holes		None Observed						
General Condition		Good						
MONITORING WELLS & OBSERVATION WELLS			OW-1	OW-2	OW-3, 4, 5, 6, 7	MW-1, 2, 3, 4		
Well Locks			Locked	Locked	Abandoned	Abandoned		
Casing Damage			None	None				
Pad Condition			Loose	Loose				
Standing Water			No	No				
SECURITY FENCE		Well maintained, no repairs required						

ATTACHMENT 2

FACILITY MAP SHOWING LOCATION OF SWMUs AND AOCs



SWMUs

1 Wastewater Treatment Plant
2 Former Surface Impoundment
3 Waste Oil Storage Tank
4 Container Storage Area (filter cake)
5 Oily Stained Areas
6. Furnace-and Stripper Air Pollution Control Systems
7 Shuttle Repair and Cleaning Station
8 Waste Solvent Storage Area
9 Lubrication Area
10 Melt Pot Furnace

Areas of Concern

A Unused Solvent Storage Area
B Scrap Machinery Storage Area
C Adhesive Station

FIGURE 4

Approximate Location of Solid Waste Management Units and Areas of Concern
Parker- Hannifin Corporation

Note: SWMUs 6, 7, 8, 9 and 10 and Area of Concern C are not to scale..

JACOBS ENGINEERING GROUP INC.

PARKER HANNIFIN
Kennett, MO.

ATTACHMENT 3

FACILITY MAP SHOWING LOCATION OF OBSERVATION AND MONITORING WELLS

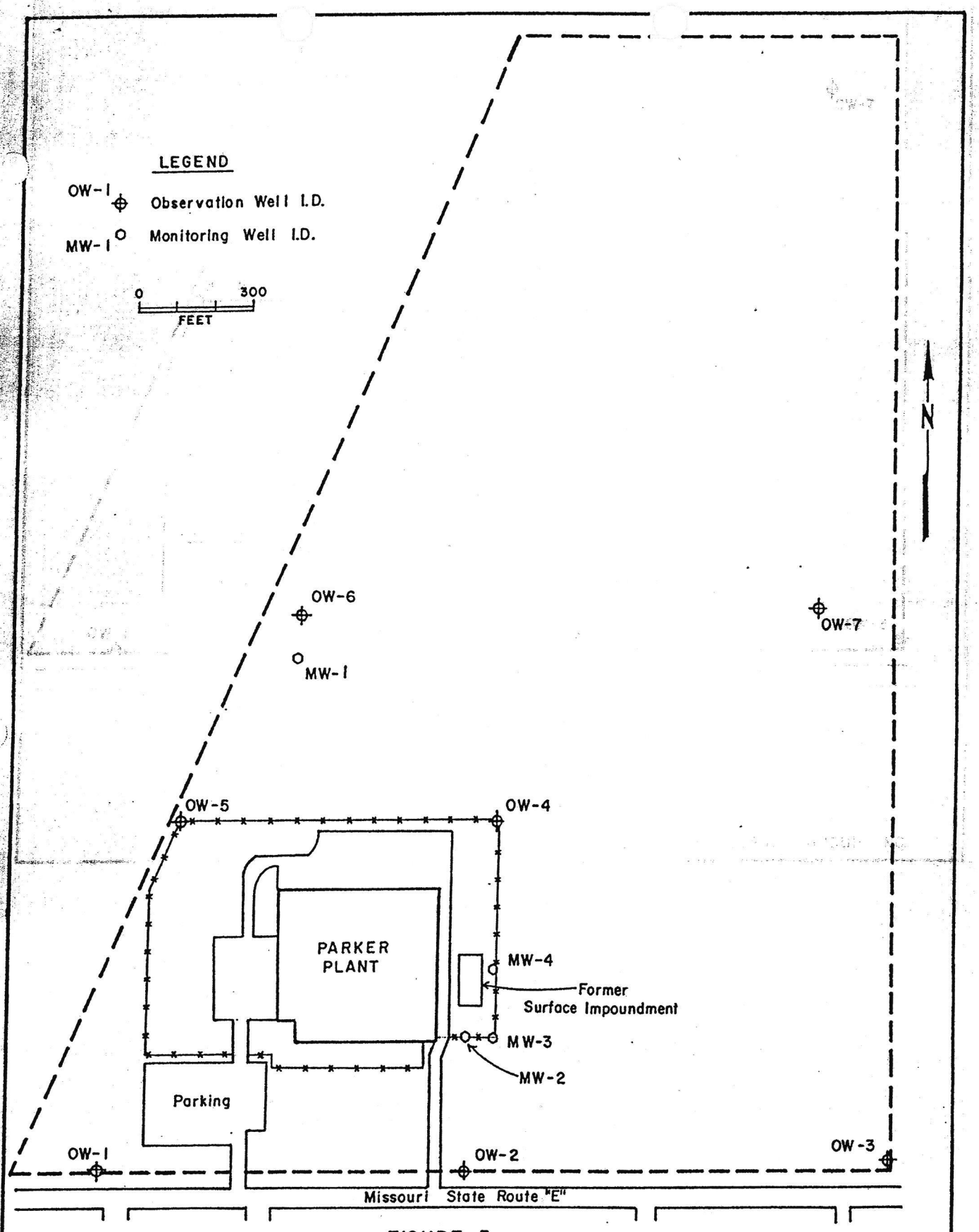


FIGURE 3

Approximate Observation and Monitoring Well Locations

Parker- Hannifin Corporation

JACOBS ENGINEERING GROUP INC.

ATTACHMENT 4

LIST OF ACRONYMS

ATTACHMENT: 4

List of Acronyms Used in this Report

Acronym	Definition of Term
AOCs	Areas of Concern
ECAP	Expedited Corrective Action Program
OW	Observation Wells
PHC	Parker Hannifin Corporation
RCRA	Resource Conservation Recovery Act
RFA	RCRA Facility Assessment
RSMo	Revised Statute of Missouri
SWMUs	Solid Waste Management Units
TCA	1,1,1, Trichloroethane